

TAUS, Karol, inz.

Road bridge over the Firth of Forth in Scotland. Inz stavby 12  
no.6:279 Je '64.

TAUS, Karol, inz.

Tenth Congress of the International Association for Hydraulic  
Research. Vodni hosp 14 no.2:49-50 '64.

Hydraulic power constructions in Scotland. Ibid.:57-59

TAUS, Karol, inz. CSc.

Measurement of the flow through turbines. Vodni hosp 14 no.9:  
334 '64

TAUS, Karol, in. CSc.

Operational readiness of the upper Vah Cascade. Vodni hosp  
15 no.4:154 '65.

TAUS, L.

Clinical evaluation of cyanazide Spofa in endogenous depression.  
Cesk. psychiat. 60 no.5:338-342 0 '64.

1. Psychiatricke oddeleni Obvodniho ustavu narodniho zdravi,  
Liberec.

STRAIA-DELIDZAKOVA, Marija, dr.; TAUSANOV, Mihail, dr.

Neonatal jaundice. Med. glas. 19 no.1:6-10 Ja '65.

1. Klinika za decje bolesti Medicinskog fakulteta u Skoplju  
(Upravnik: prof. dr. H. Duma).

TAUSANOVIC, A.

Systematization of jobs in health institutions. p. 16.

Periodical: SOCIJALNA I ZDRAVSTVENA POLITIKA. (Savet za narodno zdravlje Srbije)  
Beograd.

MEDICINE

Vol. 11, no. 12, 1958.

SO: Monthly List of East European Accessions (EEIA) LC

Vol. 8, No. 4  
April 1959, Uncl.

TAUSANOVIC, N.

Construction a viscose rayon plant. p. 1457. Vol. 9,  
No. 9, 1954. TEHNIKA. Beograd, Yugoslavia.

SOURCE: East European Accessions List, (EEAL) Library  
of Congress, Vol. 5, No. 8, August, 1956.



TAUSANOVIC, N

TAUSANOVIC, N. Artificial and synthetic fibers; importance of founding a viscose plant. p. 401

Vol 4, No. 5, May 1955

TEKSTIL

TECHNOLOGY

Zagreb

So: MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, (EEAL), Vol. 4, No. 9,  
Sept. 1955

TAUSANOVIC, Nikola, ing.

Artificial textile fibers. Alm hem ind 81-88 '56.

COUNTRY : YUGOSLAVIA  
SUBJECT : Chemical Technology. Chemical Products and  
Their Applications. Artificial and Synthetic\*  
ADD. SOUR. : RZKhim., No. 19, 1959, No. 69937  
AUTHOR : Tausanovic, N.  
TEST. : -  
TITLE : Production and Refining of Cotton and Wool  
Type Viscose Fiber.  
ORIG. PUB. : Tekstilna ind., 1958, 6, No 8, 348-355  
ABSTRACT : Reported are data pertaining to the produc-  
tion and consumption of viscose fiber in Yugo-  
slavia and in other countries. Presented are  
results of tests performed on materials made  
of this fibre.--I. Kozlov.

\*Fibers.

CARD: 1/1

H - 157

S/137/62/000/006/139/163  
A057/A101

AUTHOR: Tauscher, H.

TITLE: Endurance of steels after galvanic treatment

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 91, abstract 6I578  
("Ermüdungsfestigk. Werkstoffen und Bauelement. Votr. Warschauer  
Tagung 12. - 14. Mai 1960". Warszawa, 1961, 30 - 39, German)

TEXT: The effect of galvanic chrome, zinc, and cadmium plating upon mechanical properties of the alloy of the type  $\text{ЗСГХЧ}$  (ZSGKhCh) was investigated. Tensile-, folding- and endurance-tests were carried out with non-plated steel, galvanically plated steel, and steel annealed during 2 hrs at  $200^{\circ}\text{C}$  after plating. After hard chrome plating a decrease of  $\delta$  and  $\psi$  at rupture and decrease of folding angle was observed. These values, which are determined by the plastic properties of the base metal and coating, can be improved somewhat by annealing at  $200^{\circ}\text{C}$ . This is explained largely by the removal of  $\text{H}_2$ , formed during the galvanic treatment, from the base metal and coating, or by transforming of the  $\text{H}_2$  into a less dangerous form, as well as by the favorable change of the stressed state of metal layers, adjoining the coating. While plastic properties of

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Endurance of steels after galvanic treatment

S/137/62/000/006/139/153  
A057/A101

samples after galvanic treatment are determined by the brittleness of the chromium layer, the properties of the base metal determine the plasticity in samples after the removal of  $H_2$  by annealing. In endurance tests the properties of the coating are determining, which cannot be improved by  $200^\circ C$  annealing. Only the increase of the annealing temperature to  $400^\circ C$  may effect some increase in endurance. Contrary to chromium coatings, the properties and the state of Zn- and Cd-coatings do not play a determining role in the behaviour of steel at static and variable loads, and the destructive effect of  $H_2$  in these cases cannot manifest itself. There are 24 references.

B. Reyzin

[Abstracter's note: Complete translation]

Card 2/2

10.7400

1454

33824

S/137/62/000/001/145/237

A052/A101

AUTHOR: Tauscher, H.

TITLE: The effect of galvanic platings on steel endurance

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 38, abstract 11258  
("Wytrzymalosc zmeczeniowa tworzyw i elementow metalowych". Warszawa, Dyskus., 44, 1961, 64-65, Polish summary)

TEXT: Investigations carried out on K30SiMnCr4 steel have shown that hard chromium-plating reduces considerably the resistance of steel to cyclic loads. This is due not only to the effect of the hydrogen-saturated sublayer and internal tensile stresses, but mainly to the properties of hard chromium layer itself. The degree of endurance reduction depends on conditions of separation and crystallization of Cr which in their turn depend on the sublayer material. With the increase in the static strength of steel by means of heat treatment, increases the negative effect of hard Cr on  $\sigma_w$ . The removal of H by heating at 200°C does not improve mechanical properties and can even reduce  $\sigma_w$ . To increase  $\sigma_w$  heating at 400°C is necessary. In some cases the application of galvanic coatings does not lead to improved mechanical properties, for instance, at cadmium

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33824

The effect of galvanic platings on steel endurance

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A052/A101

and zinc plating of K30S1MnCr4. The negative effect of tensile stresses, arising at galvanic coatings, can be compensated by pre-nitriding, burnishing with rollers, case hardening, and so on. At a simultaneous action of cyclic stresses and corrosion the parts with protective galvanic coatings have a higher endurance than those without coatings.

M. Shapiro

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/004/152/201  
A060/A101

AUTHORS: Tauscher, H., Hoehne, G.

TITLE: Nitriding alloyed structural steels in liquid environments

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 117, abstract 4I723  
("Neue Huette", 1961, 6, no. 11, 701 - 707, German; Russian, English,  
French summaries)

TEXT: A survey is given of gaseous-nitriding and nitriding of steel in  
liquid environments. It is noted that the nitriding of smooth and notched steel  
specimens in liquid environments raises their wear-resistance and fatigue strength.  
There are 28 references.

A. Babayeva

[Abstracter's note: Complete translation]

Card 1/1



G/029/62/000/002/002/003  
I014/I252

AUTHORS: Tauscher H. and Fleischer H. (Dresden and Pirna [Elbe])  
TITLE: Development and properties of high-strength tempered steels

PERIODICAL: Neue Hütte, no.2, 1962, 102-111.

TEXT: After a general review of the history of development and technological peculiarities of high-strength steels, the article describes results obtained on bars and sheets of the 40 SiCrMn 7.5 and 40 SiNiCr 7.6 steels. After hardening at 900°C and tempering at 350°C both steels had a tensile strength above 190 kp/mm<sup>2</sup>. Tensile strength remained almost constant throughout the same range of tempering temperatures. The impact value decreased very little up to 600°C, being sufficiently high even at -75°C. The fatigue strength was tested up to a limit frequency of 10x10<sup>6</sup>. An increase in tensile strength from 140 kp/mm<sup>2</sup> to 160 kp/mm<sup>2</sup> by tempering at 480°C led to an increase in fatigue strength from 76 to a limit of 79 kp/

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G/029/62/000/002/002/003  
I014/I252

Development and properties...

mm<sup>2</sup> which could not be exceeded, probably due to structural changes during tempering. There are 15 figures and 6 tables.

ASSOCIATION: Institut für Werkstoffe (Institute for Materials),  
Pirna (Elbe)

SUBMITTED: July 19, 1962

Card 2/2

✓ Methylnaphthalenes as insecticides. Arnold Tausch had  
Josef Vodrážka. *Chem. Průmysl* 3(30), 118-22(1955).  
Alkylnaphthalenes contained in coal tar and some high-b.  
petroleum fractions are highly toxic for insects when used as  
fumigants. A rational production method of these compds.  
from wash oil extd. by 30% H<sub>2</sub>SO<sub>4</sub> and alkali or directly  
from raw oil was worked out. L. A. Helwich

①

*12058A, 12058B*  
VOJTIK, Vladimir; KOJAR, Jiri; TAUSEK, Vaclav

Analysis of anamnestic data of child psychiatric case histories.  
Cesk. psychiat. 54 no.1:14-21 Feb 58.

1. Detska psychitricka lecebna v Oparanech. V. V. Oparany 80, okr. Milevsko.  
(CHILD PSYCHOLOGY, statist.  
child psychiatry, analysis of anamnestic data in case  
hist. (Cz))

CZECHOSLOVAKIA

VOJTIK, V., TAUSEK, V., and KRIZ, J., Children's Mental Hospital (Detska psychiatricka lecebna), Oparany.

"A Modified Child Psychiatric Card Index"

Prague, Ceskoslovenska Psychiatrie, Vol LIX, No 3, June 63, pp 159-166.

Abstract [Authors' English summary]: A modification of a card index hitherto employed for the analysis of clinical data recorded in outpatient and inpatient children's mental institutions. By means of this index it is easier to analyze data of previous history, etiology, diagnosis, syndromes, symptoms, and treatment. Its graphic arrangement and other texts are such as to replace both the previously used punch card and case notes. The card is described and instructions are provided on how to use it. It may be used in departments of adult psychiatry. Eighteen references, including 11 Czech.

USSR/Physics - Diffusion

1 Oct 51

"Diffusion of Silver and Bromine Ions in Solid Bromide," A. Murin, Yu. Taush, Radium Inst Khlopin, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXX, No 4, pp 579-581

Purpose of this work is to measure the coeffs of diffusion of Ag and Br ions at sufficiently high temperatures when it is possible to det directly these quantities with the aid of radioactive indicators. Used the method of "ideal contact" proposed by G. Tubandt. Tabulates the results of measurements of diffusion

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(Ag<sup>+</sup>: D =  $1.02 \cdot 10^{-7}$  sq cm/sec; Br<sup>-</sup>: D =  $2.9 \cdot 10^{-11}$ )  
Submitted 20 Jul 51 by Acad P. I. Lukirskiy.

22273

TAUSH, YU.

TAUSHANOV, G.A., inzhener.

~~Conference of construction engineers on reinforced concrete~~  
elements. Bet.1 zhel.-bet. no.1:40 Ja '56. (MIRA 9:4)  
(Moscow--Reinforced concrete)

DAMIANOV, Georgi, dots. inzh.; TAUSHANOV, Liubomir, inzh.

Some peculiarities in sizing with carboxymethylcellulose. Tekstilna  
prom 13 no.5:16-20 '64.



TAUSHANOV, S.

TAUSHANOV, S. New stereophonic loud-speakers in radio receivers. p. 41. Vol. 5, no. 8, 1956 ELEKTROENERGIJA. Sofia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol 6, No. 4--April 1957

TAUSHANOV, S.

TAUSHANOV, S. Acoustic projection for auditoriums. p. 55. Glossary of foreign  
words in radio engineering. p. 62.

Vol. 5, No. 9, 1956

RADIO

TECHNOLOGY

Sofia, Bulgaria

So: East European Accession, Vol. 6, No. 3, March 1957

TAUSHANOV, T.

"Cultural and living conditions of workers in the forest managements and the forthcoming tasks."

GORSKO STOPANSTVO, Sofia, Bulgaria, Vol. 15, no. 4, Apr. 1959.

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No. 6, <sup>Sept.</sup> Jun 59  
Unclas

TAUSHANOV, T.

Executing the Decree on Restaurants, and the conditions of the subsidiary farms. p. 29.  
(Mashinizirano Zemedelie, Vol. 8, no. 1, Jan. 1957, Bulgaria)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 6, June 1957, Uncl.

1945 H. KANOV, G. P.

10(3.4) PHASE I BOOK EXPLOITATION 507/3193

Leningrad. Politechnicheskii Institut imeni M.I. Kalinina  
Izdatel'stvo, no. 198) Tekhnicheskaya gidromekhanika (Industrial Hydro-  
mechanics) Moscow, Makhis, 1958. 220 p. Mkvata slip inserted.  
1,500 copies printed.

Resp. Ed.: V.S. Smirnov, Doctor of Technical Sciences, Professor;  
Ed. of this book: L.G. Loytynskiy, Doctor of Physical and  
Mathematical Sciences, Professor; Managing Ed. for Literature  
on the Design and Operation of Machinery (Leningrad Division,  
Makhis): P.I. Petisov, Engineer; Tech. Ed.: K.G. Pol'skaya.

PURPOSE: This book is intended for engineers working in the field  
of machine construction.

COVERAGE: This collection of articles contains the results of  
original work in the field of theoretical and applied hydroaero-  
dynamics, completed in the aerodynamics laboratory of the LPI  
(Leningrad Polytechnic Institute) by members of the department

of hydroaerodynamics and the department of theoretical mechanics.  
The book is divided into four parts. The first part contains  
studies of turbine rotors. The second part contains the results  
of a laboratory study on models of turbine rotors. The second  
part contains the general conclusions drawn therefrom. The second  
part contains articles on the theory of laminar and turbulent  
motion of a viscous fluid. The articles treat the hydrodynamic  
theory of friction in bearings and suspensions, boundary layers  
and jets, the initial part of a pipe in the presence of vortex,  
and the motion of air under the action of a corona conductor.  
The articles in the third part belong to the field of applied  
hydroaerodynamics. One of the articles is a theoretical and experi-  
mental study of flow around the parts of a radar antenna. The  
second article contains the results of aerodynamical analyses of  
fishnet models. The third part contains the results of aerody-  
namical experiments on stabilizing the motion of a hydroaero-  
dynamical body, pressure distributions in the surface of a  
streamlined body, pressure distributions in nonstationary flows).  
References accompany individual articles.

#### PART ONE. A STUDY OF TURBINE STEAM EXHAUSTS

Fourth, I.L. Some Results of Studying Hydromarine Models by Using  
Air

1. A study of new types of turbines 7
2. A study of radial-axial turbines 17
3. Something new in the method of analysis 17

Bozhanov, V.K. A Study of Flow Through a Vertical  
Francis Turbine Rotor

1. A description of the experimental installation and the  
method of experiment 19
2. The flow in front of the rotor 19
3. Pressure distribution along the surface of the blades 21
4. The flow behind the rotor 24
5. Energy balance 27

Tashkhanov, G.P. The Flow Around a Circular Grid Consisting of  
a Frictionless-Arbitrary Form

1. Generalizing the results of the flow around a circular grid, consisting of segments  
of logarithmic spirals 32
2. Turbulent-source flow around a circular grid consisting  
of profiles of arbitrary form 36
3. Flow in a circular grid rotating about its own center 39

67059

SOV/44-59-9-9006

10.2000  
40(4), 16(1)

Translation from: Referativnyy zhurnal. Matematika, 1959, Nr 9, pp 68-69 (USSR)

AUTHOR: Taushkanov, G.P.

TITLE: Flow Around of a Circular Grid Consisting of Profiles of Arbitrary Form

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1958, Nr 198, 32-47

ABSTRACT: The author considers the flow around of a circular grid which is composed by profiles of arbitrary form, by a potential flow of an incompressible fluid, if in the center there is a vortex source with a given intensity. The problem is reduced to the determination of a function which maps conformally the region of flow in the circular grid onto the exterior of a circle the flow around of which is known by the flow originating in the vortex source.

For a grid consisting of pieces of logarithmic spirals, the mapping function has the form

$$\zeta = \exp \left[ \frac{m_0}{Nq_0} \ln \frac{z_1 \left( z_1 - R + \frac{r_0^2}{R} \right)}{z_1 - R} - \frac{r_0^2}{Nq_0} \ln \frac{z_1 (z_1 - R)}{z_1 - R + \frac{r_0^2}{R}} \right],$$

where  $\zeta$  is the lattice plane; N is the number of its shovels,  $q_0 = m_0 - i\Gamma_0$   
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67059

SOV/44-59-9-9006

10(4),16(1)

Flow Around of a Circular Grid Consisting of Profiles of Arbitrary Form  
is the intensity of the vortex source,  $z_1$  is the plane of the circle with the center in  $(R,0)$  and with the radius  $r_0$ . After uncomplicated calculations from this formula the author obtains equations which fix a correspondence of the points on the circle and the points on the piece of the logarithmic spiral; then the velocity distribution on the shovel of the grid is found. In the case of a grid of profiles of arbitrary form the mapping function is written as a series

$$\ln \frac{z}{R_1} = \frac{1}{N} \ln \frac{\xi}{R_1} + \sum_{k=0}^{\infty} \frac{c'_k}{(z_1 - R)^k},$$

where  $z$  is the grid plane. By a separation of real- and imaginary part the author finds the formulas for the correspondence of the profile- and circle points.

For a grid of thin profiles the center line of which distinguishes little from a logarithmic spiral, it is recommended to solve the fundamental integral equation of the conformal mapping by successive approximation

✓

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10(4), 16(1)

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Flow Around of a Circular Grid Consisting of Profiles of Arbitrary Form

(as a first approximation there serves the grid of logarithmic spirals) in order to determine in this manner the correspondence of the profile- and circle points.

The obtained results are generalized to the case where the circular grid rotates around its origin with a constant angular velocity.

L.I.Chibrikova

Card 3/3



TAUSHKANOV, G. P.: Master Phys-Math Sci (diss) -- "The computation of a round lattice composed of profiles of arbitrary form". Leningrad, 1959. 21 pp  
(Min Higher Educ USSR, Leningrad Polytech Inst im M. I. Kalinin), 150 copies  
(KL, No 14, 1959, 118)

5(2), 5(3)

AUTHORS: Kuzin, I. A., Taushkanov, V. P.

SOV/153-58-2-12/30

TITLE: Investigation of the Separation Processes of Uranium and Thorium on Alginic Acid (Issledovaniye protsessa razdeleniya urana i toriya na al'ginovoy kislote)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 2, pp 70 - 74 (USSR)

ABSTRACT: The process mentioned in the title was investigated with a weakly acid cationite, alginic acid, and a highly acid "wofatite" KS (Ref 1). After the survey of publications (Refs 1-5) the authors found that alginic acid represents a mixture of polycarboxylic acids of different degrees of polymerization (Ref 6); it may be used as sorbent for the separation of polyvalent cations from cations of lower valence. In the experimental part the production of alginic acid and the determination of uranium and thorium are described. In another chapter the sorptive power of alginic acid and of "wofatite" KS are discussed at different pH-values. Figure 1 shows

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Investigation of the Separation Processes of Uranium  
and Thorium on Alginic Acid

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the dependence of the sorptive power of these two substances on the pH value of a solution of the same concentration (per cent by weight) with regard to the ions  $UO_2^{2+}$ ,  $Th^{4+}$  and  $Na^+$ . The sorption of sodium ions by alginic acid stops at pH 1.8-2.0, of uranyl ions at pH 0.5; at the same time a considerable sorptive power is maintained for thorium ions. Under the same conditions "wofatite" KS remains capable of sorbing all cations. At a pH below 2 mainly thorium is adsorbed by alginic acid and "wofatite" KS, at higher values it is uranium. Thorium adheres better to either of the sorbents than uranium (Fig 2). The apparatus for separating uranium and thorium on every sorbent, as well as its operation are described. The accuracy of this separation depends on the pH value which should be 2 or less in the initial solution. The selection of the washing out agents is important; the authors used 0.02N solutions of nitric acid,

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Investigation of the Separation Processes of Uranium  
and Thorium on Alginic Acid

SOV/153-55-2-12/50

hydrochloric acid, and sulfuric acid as well as 2.0 N acetic acid. From figure 4 it may be seen that the most efficient separation was obtained when using 0.02 N hydrochloric acid or nitric acid. Table 1 shows that in the washing out of uranium with 0.02 N nitric acid the main mass of thorium remains back in the two first columns whereas there is no thorium in the fourth column. Uranyl is separated from thorium by washing out with 3 liters 0.02 N  $\text{HNO}_3$ . Table 2 shows the results of the separation of uranium and thorium on "wofatite" KS. As the bond of the two metals with "wofatite" KS is stronger than with alginic acid higher acid concentrations are needed for its washing out. The experiments proved the usefulness of either sorbent, for the separation of uranium and thorium. There are 4 figures, 2 tables, and 8 references, 2 of which are Soviet.

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Investigation of the Separation Processes of Uranium and Thorium on Alginic Acid SOV/153-58-2-12/30

ASSOCIATION: Leningradskiy tekhnologicheskii institut im. Lensovet  
(Leningrad Technological Institute imeni Lensovet) Kafedra yestest-  
vennykh radioaktivnykh i redkikh elementov ( Chair  
of Natural Radioactive and Rare Elements)

SUBMITTED: September 18, 1957

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5(4)

AUTHORS:

Kuzin, I. A., Plachenov, T. G.,  
Taushkanov, V. P.

S07/193-58-3-11/30

TITLE:

Investigation of the Structure and Sorption Capacity  
of Coal Oxidized at Low Temperature (Izucheniya struktury  
i sorbtionnykh svoystv ugley okislennykh pri nizkikh  
temperaturakh) Communication I (Soobshcheniye I.)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimiches-  
kaya tekhnologiya, 1958, Nr 3, pp 61 - 65 (USSR)

ABSTRACT:

The sorption capacity of coal depends on the surface  
property, the pore volume and the distribution of  
the pores with effective radii. In the course of the  
coal activation oxides are formed at the surface which,  
according to the conditions of the treatment,  
either adopt an alkaline or acid character. In aqueous  
solutions such oxides can be hydrated by forming  
surface compounds which dissociate under splitting  
off of hydrogen ions or hydroxyl ions (Refs 1,2).  
There are no data available in publications on the

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Investigation of the Structure and Sorption Capacity  
of Coal Oxidized at Low Temperature. Communication I

SOV/153-98-3-11/30

secondary structure and the sorption capacity of the coal under review. The study of these properties will, however, extend the knowledge of the surface property of the coal and clarify the possibilities of a manufacture of more acid- and alkaliproof ion-exchange sorbents than those which have been known so far. Activated birch charcoal of the type **BAU** was chosen as test material. The low-temperature oxidation was performed with nitric acid on warming. The coal structure was studied by pressing in mercury (Ref 3). The maximum value of the sorption range was studied as well. The results are given in table 1 and figure 1. It can be seen from them that the oxidation process exerts a considerable influence upon the distribution of macropores at the effective radii. The redistribution of the macro- and transition pores occurring during the oxidation influences the variation of the specific pore surface. The increase in space of pores with effective radii  $1.1 \cdot 10^{-4}$  -  $3.2 \cdot 10^{-4}$  cm causes in oxidized coal a decrease of the specific total surface

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Investigation of the Structure and Sorption Capacity  
of Coal Oxidized at Low Temperature. Communication I

SOV/153-50-3-11/56

of the macropores and transition pores. The sorption qualities of the coal were investigated with regard to  $\text{Ba}^{2+}$ ,  $\text{Na}^+$  and  $\text{Cl}^-$ -ions. Figure 2 presents titration curves of different samples of oxidized coal as compared with the titration curve of the solution without coal. The difference between the ordinates of the curves of the coal titration and those of the "pure" solution, in mg-equivalents  $\text{NaOH}$  or  $\text{HCl}$  per 1 g of coal, illustrates the absorption capacity of the coal with respect to  $\text{Na}^+$  or  $\text{Cl}^-$ -ions at a certain pH value. The dependence of the absorption capacity of the coal on the pH value of the medium is given in figure 3. The increase in concentration of  $\text{HNO}_3$  during the coal treatment increases the degree of oxidation. This increases the total absorption capacity of the coal with regard to cations and decreases this capacity as far as anions are concerned; i.e., a transformation of the alkaline surface compounds into acid ones takes place. Thus, the authors

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Investigation of the Structure and Sorption Capacity  
of Coal Oxidized at Low Temperature. Communication I

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succeeded in producing oxidized coal with a high ion-exchange capacity regarding barium and sodium cations. In the oxidation of BAU with  $\text{HNO}_3$ , coal can be obtained which is similar to the weakly acid "cationites" as far as their ion-exchange properties are concerned. There are 4 figures, 2 tables and 4 Soviet references.

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni  
Lensoveta (Leningrad Technological Institute imeni  
Lensoveta) Kafedra yestestvennykh radioaktivnykh i  
redkikh elementov (Chair of Natural Radioactive  
and Rare Elements)

SUBMITTED: September 18, 1957

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KUZIN, I.A.; PLACHENOV, T.G.; TAUSHKANOV, V.P.

Structure and sorptive properties of  $\alpha$ -ols, oxidized by hydrogen peroxide. Zhur. prikl. khim. 31 no.9:1318-1322 S '58. (MIRA 11:10)  
(Sorbents)

35426

S/081/62/000/004/010/087  
B149/B101

5.3931

AUTHORS: Kuzin, I. A., Taushkanov, V. P.

TITLE: Change in the physicochemical properties of anionites under the action of gamma-radiation

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 74-75, abstract 4B519 (Tr. Leningr. tekhnol. in-ta im. Lensoveta, no. 55, 1961, 72-74)

TEXT: The influence of  $Co^{60}$  gamma-radiation on the solubility, swelling, ion-exchange capacity, and specific gravity of the anion-exchange resins 3A3-10T (EDE-10P) (I) and AN-2 (AN-2F)(II) in an aqueous medium was investigated. The total exchange capacity of I and II with respect to the chloride ion decreased with increasing doses; the loss in weight was up to 40% for I and up to 12% for II. The swelling capacity of I increased by 4 times, that of II by 72%. The authors ascribe this effect to the destruction of the three-dimensional structure of the resins. The radiation had no influence on the specific gravity of II, but the specific

Card 1/2

Change in the physicochemical ...

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B149/B101

gravity of I was somewhat increased. It was observed that the presence of benzene rings in II led to the stabilization of the spatial structure of the resin, and that in this case chiefly the amino groups were destroyed. [Abstracter's note: Complete translation.]

Card 2/2

KUZIN, I.A.; PLACHENOV, T.G.; TAUSHKANOV, V.P.

Sorption of molybdenum by activated charcoals and anion exchangers.  
Zhur, prikl.khim. 34 no.11:2126-2130 N '61. (MIRA 14:6)

1. Leningradskiy tekhnologicheskii institut imeni Lensoвета.  
(Molybdenum) (Sorption)

S/186/62/004/006/009/009  
E075/E436

AUTHORS: Kuzin, I.A., Taushkanov, V.P., Aleshechkin, V.S.

TITLE: Sorption of uranium by activated carbons from the solutions of sodium rodanide

PERIODICAL: Radiokhimiya, v.4, no.6, 1962, 732-737

TEXT: The sorption of U was investigated on activated carbons BAY (BAU), CKT (SKT) and CKLT (SKLT), carbon being a substance stable to radiation and chemical action. The maximum sorption of U occurs in 0.22 M NaSCN. The specific sorption of U ions decreases with the increasing pH of the solutions. The sorption of U from nitrate and sulphate solutions at pH 1 to 2 varies from 0.001 to 0.15 mM/g, but in NaSCN solution it reaches 1 mM/g. Adsorption isotherms of U on the three carbons from 0.22 M NaSCN at pH = 2 shows that the capacity of the carbons increases in the order SKLT, SKT, BAU and is 254, 215 and 107 mg/g respectively for the solutions containing 3 g of U per litre. As the sorption of Th, Ce and Ba occurs only at pH > 2, the carbons were used successfully for the separation of U from these elements. Chromatographic separation of binary mixtures of U with  
Card 1/2

Sorption of uranium ...

S/186/62/004/006/009/009  
E075/E436

the above elements was carried out using carbons BAU and SKLT. The coefficients of purification (the ratio of the concentration of separated element in the original solution to the concentration of the element after desorption of U) were found to be higher than  $10^2$  to  $10^3$ . It is concluded that the activated carbons can be used for the purification of U from a number of elements such as Al, Th, Ni, alkali and alkali earth metals, which do not form strong complexes with rodanide ions. There are 7 figures and 3 tables.

SUBMITTED: June 21, 1961

Card 2/2

KUZIN, I.A.; GALITSKAYA, I.A.; TAUSHKANOV, V.P.

Precipitation of ammonium uranyl disulfate from nitrate  
solutions. Radiokhimiia 5 no.1:89-93 '63. (MIRA 16:2)  
(Ammonium uranyl sulfates)  
(Nitrates)



KUZIN, I.A.; TAUSHKANOV, V.P.; BOSHINA, B.

Sorption of metals by the SKT activated carbon from acetate  
solutions. Zhur.prikl.khim. 36 no.3:604-608 My '63.

(MIRA 16:5)

(Metals)

(Carbon, Activated)

~~L 13568-63~~

EP1/EPF(c)/EWP(c)/EWT(m)/BDS APTTC/ASD Ps-L/Pr-L JAI/HE/

ACCESSION NR: AP3000180

8/0080/63/036/004/0703/0707

AUTHOR: Tseng Hsien-F; Kuzin, I. A.; Taushkanov, V. P.

TITLE: Purifying uranium<sup>21</sup> from heavy metals on activated carbon<sup>21</sup>

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 4, 1963, 703-707

TOPIC TAGS: absorption of uranium, nitrate solutions, activated carbon, thorium, zirconium, iron, vanadium, tributylphosphate (TBF)

ABSTRACT: For absorption of uranium from nitrate solutions, brand BAU activated carbon (previously treated by 1 m of chloride solution, with prior surface application of tributylphosphate (TBF), was used. Absorption of uranium and other heavy metals was carried out under static conditions by bringing 1 g of carbon in contact with 100 ml of solution for a period of 4-5 days. To estimate uranium, thorium, zirconium, iron, and vanadium, the authors used gravimetric, volumetric, and colorimetric analyses. Evaluation of pH of solutions was using an 4-5 bulb potentiometer with a glass electrode. The authors conclude that it is possible to separate uranium from thorium, zirconium, iron, and vanadium by the described method. Orig. art. has: 8 figures, 1 formula, and 1 table.

ASSOCIATION: none

SUBMITTED: 03 Dec 62

DATE ACQ: 12 Jun 63

ENCL: 00

SUB CODE: CH

NO REF SOV: 007

OTHER: 003

Card 1/1

L 11577-63

IFR/EPT(g)/EMP(g)/EMT(m)/ADS

AFPTC/ASD

Pa-h/Pr-h

WH

ACCESSION NO. APPROVED

3,000,000, 3,000,000

AUTHOR: Kuzin, I. A.; Semushin, A. M.; Taushkanov, V. P.

TITLE: The effect of Co sup 60 Gamma radiation on the ion-exchange properties of oxidized coals

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 4, 1963, 914-917

TOPIC TAGS: Gamma radiation, ion-exchange properties, cation-exchange property, anion-exchange property, hydrochloric acid, cation-exchange capacity, sodium ion, NaOH, anion-exchange, chlorine ion

ABSTRACT: The radiation stability of activated coals of various compositions with cation and anion exchanging properties was studied. The test samples of coals were treated with 1N hydrochloric acid, after that, by a 1N solution of NaOH, distilled water, and so on. The ion-exchange capacity of the coals was determined by the exchange of the cation in contact with a 1N solution of NaOH. The anion-exchanging capacity was determined by the chlorine ion in 1N solution of hydrochloric acid. Coals which were charged into OH form and oxidized coals which were charged into the H and Na forms were subjected to irradiation in

Card 1/2

L 12522-2A1

ASSOCIATION: none

water. In the latter case, the weighed portions of coal which were preliminarily oxidized by nitric acid were saturated by sodium ions from 0.2 N of NaOH. The coal was irradiated at room temperature by a Co sup 60 Gamma-radiating source. The study of the physico-chemical properties of the coals up to and after irradiation was done in accordance with a previously described method (Demushin, N. M., Kuzin, I. A.; Zhurnal prikladnoy khimii, v. 32, 1959, p. 2193). Ion exchangers with cation capacity from 2.41 to 4.87 mg-equiv/g were obtained by oxidizing brand BAU, KAU, SKT, and SKLT activated coals with nitric acid. The physico-chemical and ion-exchanging properties of the oxidized coals do not change with radiation doses of  $1.5 \times 10^8$  to  $1.9 \times 10^8$  roentgens. Orig. art. has: 4 tables.

ASSOCIATION: none

SUBMITTED: 21 Jun 62 DATE ACQ: 12 Jun 63 ENCL: 00

SUB CODE: CH NO REF SOV: 007 OTHER: 000

Card 2/2

KUZIN, I.A.; TAUSHKANOV, V.P.

Sorption of uranium and thorium from ammonium thiocyanate  
solutions by anion exchanger EDE-IOP. Zhur. prikl. khim.  
37 no. 4:764-768 Ap '64. (MIRA 17:5)

ACCESSION NR: AP4038561

8/0080/64/037/005/1005/1009

AUTHOR: Kuzin, I. A.; Taushkanov, V. P.

TITLE: Sorption of uranium by anionites from sulfuric acid solutions.

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 5, 1964, 1005-1009

TOPIC TAGS: uranium, iron, vanadium, copper, manganese, aluminum sorption, ion exchange, chemical separation, anionites, chromatography

ABSTRACT: The separation of uranium by sorption on anionites from sulfuric acid solutions experiences interference from elements which are in solution in the form of anions or negatively charged complex ions. In this work an investigation was made of the sorption of uranium and base elements which accompany uranium in nature by the following anionites: AMP, EDE-10P and AN-2F. The sorption of uranium, aluminum, iron, copper, manganese and vanadium was conducted under static conditions in 100 ml flasks containing 0.5 of anionite (in recalculation to dry weight) and 50 ml of the investigated solution. The solution was filtered after 7 days and the equilibrium concentrations of these elements were determined gravimetrically, volumetrically or colorimetrically. It was found that aluminum and

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ACCESSION NR: AP4038561

manganese are not sorbed by the anionites and that copper is sorbed only by the EDE-10P and AH-2F anionites. The maximum sorption of uranium by EDE-10P and AN-2F was observed from 0.05 M solution and by AMP from 0.025 M solution with respect to sulfuric acid. The sorption of iron, vanadium and copper is a function of the pH of the solution. When the concentration of sulfuric acid is 0.25 m/l, absorption of these elements does not exceed 0.1 mM/g. At the same time the capacity of EDE-10P with respect to uranium is 223 mg/g, the capacity of AN-2F is 198 mg/g and that of AMP is 88 mg/g. Orig. art. has: 1 table and 4 figures.

ASSOCIATION: None

SUBMITTED: 09Oct62

ENCL: 00

SUB CODE: IC, MM

NO REF SOV: 008

OTHER: 002

Card

2/2

KUZIN, I.A.; PLACHENOV, T.G.; ALEKSANDROVA, N.S.; TAUSHKANOV, V.P.

Effect of the porous structure of lignin coals on uranium  
sorption, Zhur.prikl.khim. 38 no.9:2026-2030 S '65.  
(MIRA 18:11)

1. Leningradskiy tekhnologicheskii institut imeni Lensoвета.



TAUSHKANOV, V.P.; KUZIN, I.A.; OSTAPENKO, Yu.V.

Sorption of metals from hydrochloric acid solutions by activated  
carbon SKT. Zhur. prikl. khim. 38 no.5:1048-1053 My '65.

(MIRA 18:11)

1. Leningradskiy tekhnologicheskij institut imeni Lensoвета.

L 11025-66 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) I'P(c) JT/WW/JG

ACC NR: AP5025660

SOURCE CODE: UR/0080/65/038/010/2332/2334

AUTHOR: Kuzin, I. A.; Andronov, Ye. A.; Taushkanov, V. P.

ORG: Leningrad Technological Institute im. Leningret (Leningrad'skiy tekhnologicheskii institut)

TITLE: Sorption of uranium by platinized charcoal

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 10, 1965, 2332-2334

TOPIC TAGS: sorption, uranium compound, platinum, charcoal, thermal decomposition, acetic acid, hydrochloric acid, sodium hydroxide, hydrogen, oxygen

ABSTRACT: The property of platinized charcoal to recharge in response to changes in the gas atmosphere was utilized in this work to study the sorption mechanism of complex ions of U (VI). The charcoal was prepared by thermal decomposition of phenyl-formaldehyde resin with subsequent activation at 800° C in a CO<sub>2</sub> stream until 50% was burned out. The residue upon ignition of activated charcoal was 0.08% and the amount of deposited platinum on the charcoal comprised 0.25%. To determine the sorption capacity of the platinized charcoal and its ability to change its surface charge in hydrogen and oxygen atmosphere, sorption of HCl, HSCN, NaOH and CH<sub>3</sub>COOH from 0.5 N solutions was investigated. Sorption on 0.25 g of charcoal from 25 ml of solution for 4 hours was conducted. In an oxygen atmosphere platinized charcoal absorbs HCl and absorbs no NaOH whatsoever while the reverse is true in a hydrogen atmosphere.

UDC: 541.183.5+661.183.2+546.791

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L 11025-00

ACC NR: AP5025660

HSCN and  $\text{CH}_3\text{COOH}$  are absorbed in both hydrogen and oxygen atmospheres. This is explained by the fact that acetic acid is absorbed to a significant extent by the platinized charcoal in a molecular form. HSCN on the other hand is adsorbed in a hydrogen atmosphere due to specific sorption of thiocyanide ions. It is thus demonstrated that HCl is absorbed by platinized charcoal through the ion-exchange mechanism while thiocyanic acid is absorbed by a mixed mechanism. Absorption of uranium by platinized charcoal in the absence of complex forming additives and in the presence of 1 M ammonium chloride in an oxygen atmosphere is not observed and in a hydrogen atmosphere it does not exceed 5 mg/g. Negatively charged uranium complexes are absorbed by platinized charcoal from concentrated hydrochloric acid by the ion exchange mechanism. Complex uranium ions with acetate and thiocyanide ions are sorbed on platinized charcoal through the mixed ion exchange and specific mechanism. Orig. art. has: 2 tables.

SUB CODE: 07/

SUBM DATE: 01Jun64/

ORIG REF: 012/

OTH REF: 002

HW  
Card 2/2

L 39075-66 EWT(m)/ENP(L)/ETI IJP(c) T/48

ACC NR: AP6021967

SOURCE CODE: UR/0153/66/009/002/0195/0199

AUTHOR: Taushkanov, V. P.; Boganch, Ya.

ORG: Department of Technology of Rare and Trace Elements, Leningrad Technological Institute im. Lensovet (Kafedra tekhnologii redkikh i rasseyamykh elementov, Leningradskiy tekhnologicheskii institut)

TITLE: Separation of cobalt from nickel on activated SKT carbon

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 2, 1966, 195-199

TOPIC TAGS: cobalt, nickel, manganese, adsorption, activated carbon / SKT activated carbon

ABSTRACT: The article presents data on the separation of manganese (II) and nickel from cobalt (II) on activated SKT carbon in a medium of ammonium thiocyanate and acetone. A study of the adsorption of these metals from 0.001-5.0 M ammonium thiocyanate showed that the adsorptive capacity of SKT carbon for nickel and cobalt is greatest at an ammonium thiocyanate concentration of 0.2 and 0.7 mole/l respectively. It is shown that during adsorption on SKT carbon from 15% acetone solutions with 0.7 mole ammonium thiocyanate per liter and 0.1 mole HCl per liter, cobalt separates quantitatively from nickel and manganese with purification coefficients in excess of 1030-3300. The proposed method of separation of cobalt from nickel on SKT carbon is

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UDC: 661.193.2+541.183+546.73.74

L 39076-66

ACC NR: AF6021967

simpler than the methods involving anion exchange resins, since it does not require the use of concentrated HCl solutions. In addition to manganese and nickel, alkali, alkaline earth, and rare earth elements which are not adsorbed from 0.7 M ammonium thiocyanate solutions can be separated from cobalt on SKT carbon. Orig. art. has: 4 figures and 1 table.

SUB CODE: 07/ SUM DATE: 27May64/ ORIG REF: 013/ OTH REF: 001

Cord 2/2 MLP

L 40004-66 EWT(m)/EWP(t)/ETI LJP(c) JD/WW/HW/JG  
ACC NR: AP6008272 (N) SOURCE CODE: UR/0080/66/039/002/0359/0362 4/8

AUTHOR: Kuzin, I. A.; Taushkanov, V. P.; Leonov, B. M.; Boganch, Ya. 21

ORG: none

TITLE: Sorption of metals from an acetate solution by SKT activated charcoal

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 2, 1966, 359-362

TOPIC TAGS: sorption, chemisorption, acetic acid, ammonium compound, URANIUM

ABSTRACT: The sorption of zirconium, chromium, cadmium, zinc, lead, manganese, nickel, cobalt, uranium, barium, and cesium by activated SKT charcoal from solutions of acetic acid and ammonium acetate was studied. It was found that uranium is more readily sorbed by the charcoal than any of the other metals. The optimum mixture of acetic acid and ammonium acetate for the sorption of uranium is 0.45 mol acetic acid and 0.05 mol ammonium acetate. Addition of the latter to the acetic acid solution immediately increased the sorption by the charcoal; however, continued increase in the concentration of ammonium acetate beyond 0.05 mol reduced the sorptive capacity of the charcoal exponentially. It was found that  $\text{NH}_4\text{NO}_3$  in a pH solution of 2.4-3.0 slightly increased the sorptive capacity of charcoal above a salt concentration of 1 mol/dm<sup>3</sup>. Experimental data was obtained on a bed of charcoal 60 mm high. Passage of the acetate so-

UDC: 661.183.2+547.292

Card 1/2

I. 40004-66

ACC NR: AP6006272

lution through the bed occurred at a rate of  $1 \text{ cm}^3/\text{cm}^2 \cdot \text{min}$ . Orig. art. has: 2 tables, 2 figures.

SUB CODE: 07, 11/

SUBM DATE: 19Apr65/

ORIG REF: 006/

OTH REF: 002

Card 2/2 11b

85773

S/048/59/023/011/007/012  
B006/B056

24.3500 (1035, 1138, 1160)

AUTHORS: Bundel', A. A., Rusanova, A. I., Taushkanova, L. B.TITLE: Some Data Concerning the Production Mechanism of Sulfide LuminophoresPERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol. 23, No. 11, pp. 1326-1333

TEXT: The present paper gives a survey of the influence exerted by various elements and compounds in the production of sulfide luminophores. In the introduction the results of investigations carried out by other authors as well as some results obtained by the authors of this paper in previous investigations are discussed, and special account is taken of the influence on the blue glow centers. Thus, Riehl and Ortmann (Ref. 5) were able to show that in the tempering of deoxidized ZnS no blue glow effect occurs in the absence of oxygen, whereas the authors were able to show that no oxygen is necessary for the production of blue glow centers. For the purpose of clearing this matter, further investigations were carried out. ZnS-luminophores of the "Krasnyy khimik" plant, which had a content of

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85773

Some Data Concerning the Production  
Mechanism of Sulfide Luminophores

S/048/59/023/011/007/012  
B006/B056

(Fe+Ni+Cu)  $< 10^{-7}$  g/g and about 1.5%  $\text{SO}_4^{2-}$ , were deoxidized in a  $\text{H}_2\text{S}$ -current (3 hours with  $900^\circ$ , layer thickness  $\leq 8$  mm). The samples treated in this manner, which showed no luminescence also when excited, were further treated ( $300^\circ$  in  $\text{N}_2$ -vacuum - 1 mm Hg - NaCl - fluxing agent 3%; annealing at  $950^\circ$ , 20 min, etc.). The preparations obtained, which had an oxygen content of  $0.7 \cdot 10^{-7}$  -  $6 \cdot 10^{-3}$  g  $\text{O}_2$  per one g of ZnS, showed both green and blue glow. They were excited by means of the Hg-line (366 m $\mu$ ). At room temperature the spectra had two bands, a blue one and the green one of oxygen ( $\lambda_{\text{max}} = 465$  m $\mu$ ), ( $\lambda_{\text{max}} = 530$  m $\mu$ ) (Fig. 1). The luminophore spectra, which had been produced in the presence of small quantities of oxygen, had the same shape but showed great differences in brightness. Thus, the brightness of the blue band in the case of  $0.7 \cdot 10^{-7}$  g  $\text{O}_2$  per one g of ZnS was only 2.8% of that of a luminophore produced in air; with an increase of the oxygen content intensity increases exponentially (Fig. 2). A large number of further experiments carried out with a view of explaining the influence exerted by oxygen more accurately is then described. Short-time annealing of deoxidized ZnS with NaCl without  $\text{O}_2$  led to no fluorescence, ✓

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Some Data Concerning the Production  
Mechanism of Sulfide Luminophores

S/048/59/023/011/007/012  
B006/B056

but a minimum addition of  $O_2$  caused blue and green glow simultaneously. ZnS was heated with and without NaCl in pure HCl - and in  $HCl+O_2$ -atmosphere. In the latter case the 530 mμ-band again occurred. Blue glow intensity increases sharply with increasing HCl-pressure (with  $O_2$ ) and attains a saturation value (Fig. 3). Similar experiments were made also when annealing in  $SO_2$ -atmosphere and in air. Experiments show that only molecular oxygen is an agent that stimulates the production of a non-activated luminophore. The acceleration of luminophore production by  $O_2$  was investigated on ZnS·CdS·Ag-luminophores. Experiments of this kind have been described by T. G. Bulankovaya. They were carried out under the same conditions as those carried out by Klement and Ormont (Refs. 9, 10). The influence exerted by fluxing-agent salts upon the production kinetics of the luminophores was investigated on ZnS-Cu. The aging effects have already been investigated by Rusanova (Ref. 13). In general, luminophores with more than  $5 \cdot 10^{-6}$  g Cu per one g of ZnS in the course of time show an attenuation of the green and an intensification of the blue band. The authors also carried out experiments in this respect. The results are com-


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Some Data Concerning the Production  
Mechanism of Sulfide Luminophores

S/048/59/023/011/007/012  
B006/B056

pared with those obtained by Alentsev and Cherepnev (Ref. 15), by  
Frenkel' (Ref. 17), and especially with those obtained by Riehl and  
Ortmann. There are 7 figures and 19 references: 14 Soviet.



Card 4/4

S/081/60/000/024/00-1/016  
A005/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 24, p. 39, # 95431

AUTHORS: Bundel', A.A., Taushkanova, L.B.

TITLE: The Importance of Crystallization Processes of the Principal Substance at the Synthesis of ZnS- and CdS-Phosphors

PERIODICAL: Sb. tr. Gos. in-ta prikl. khimii, 1960, No. 43, pp. 109 - 122

TEXT: The authors studied the effect of gaseous agents on the formation of activatorfree ZnS- and CdS-phosphors. It is shown that the luminescence foci of such phosphors do not contain any substances from the gaseous phase. The possibility is shown to obtain ZnS-phosphors activated by sulfur.

Authors' summary

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

22153  
S/048/61/025/004/002/048  
B104/B201

24.3500

AUTHORS: Bundel', A. A., Guretskaya, Z. I., and Taushkanova, L. B.  
TITLE: Thermodynamic bases of the activation mechanism of sulfide-  
and sulfide-selenide luminophores  
PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25,  
no. 4, 1961, 445-449

TEXT: This paper has been read at the 9th Conference on Luminescence  
(Crystal Phosphors), Kiyev, June 20-25, 1960. It offers a comparison  
between experimental data, with conclusions being drawn from a sufficiently  
general thermodynamic viewpoint. The authors have proved earlier that the  
introduction of neutral activator atoms into the crystal is necessary for  
the formation of luminescence centers. The results obtained on that  
occasion, however, are not suited for a thermodynamic study of the con-  
sequences of temperature- and concentration gradients in the system. The  
greatest importance is attached to clarifying the self-activation mechanism  
of (Zn, Cd) (S, Se) luminophores. The authors have earlier been able to  
show that it is sufficient for the self-activation of a ZnS crystal in a

Card 1/5

22153

S/048/61/025/004/002/048  
B104/B201

## Thermodynamic bases of...

sealed space to attain a temperature at which diffusion processes take a sufficiently rapid course. The following processes take place in this connection: (1) passage of a part of sulfide into the vapor phase to attain the saturation pressure of ZnS molecules in the system; (2) dissociation of sulfides in the gaseous phase.  $S_2$  is formed, among others; (3) the neutral dissociation products are divided between gaseous phase and the crystal. For every annealing temperature there is a certain concentration of neutral zinc and sulfur atoms. Special investigations, in which it has been attempted to find the causes for the absence of sulfur bands in the spectrum of self-activated zinc sulfide, have confirmed these views. Zn(S, Se) luminophores constitute a better suited object for checking the above conception. The authors examined the spectra of different compositions of these luminophores at different excitation intensities in the temperature range of from  $-196^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$ . Moreover, also the spectra of the afterglow have been examined. Some of the results are graphically illustrated in Fig. 1. In the behavior of the zinc band the authors note a proof of the dissociation mechanism of self-activation. Fig. 2 presents the concentration of selenium in the luminophore as a function of the selenium pressure in the gaseous phase. A different mechanism of selenium

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S/048/61/025/004/002/048  
B104/B201

Thermodynamic bases of...

introduction may be observed from this diagram. Selenium adds to the anion - lattice sites, and forms positive holes and cation sites. The correctness of this assumption has been proved by a method, suggested by Ryvkin, for determining the sign of the carrier in photoexcitation. The authors conclude from the results that the penetration of selenium into the ZnS lattice at low pressures is a pure dissolution process. A chemical interaction of atomic selenium with  $S^{2-}$  ions begins only at high pressures and concentrations. Sulfur is ejected from the lattice, Se atoms are inactivated and pass over to the basic substance. In the final discussion, A. M. Gurvich acknowledges the benefits derived from the authors' examinations, but, at the same time, points out some serious drawbacks: (1) the authors consider the system as consisting of sulfides and dissociation products only; (2) the property of luminescence as a consequence of the appearance of neutral atoms does not follow from the thermodynamic considerations. N. I. Ivanova and M. A. Konstantinova-Shlezinger are mentioned. There are 3 figures and 5 Soviet-bloc references.

X

Card 3/5

PHASE I BOOK EXPLOITATION: SOF/A017

Technicality article: *Usselskiy izvod. Otkrytiye tekhnicheskoy informatsii*  
 Izobrazheniya elementov parovogo i gazovogo turbin i osyevykh kormes-  
 sator (Investigations of the components of steam and gas turbines  
 and axial-flow compressors) *Prilozheniye*, 1960. 488 p. (Series  
 Istei Sbornik, No. 6) Extra copy inserted. 3,200 copies printed.  
 Sponsored Agency: *NAZS*. Izobrazheniya ekonomicheskoy administratsii  
 Energiya. State Publishing House. Upravleniye tekhnicheskoy informatsii  
 Sankt-Peterburg.

Mr. A.S. Zil'berman, Candidate of Technical Sciences, Ed. of  
 Publishing House V.P. Yash'yeva and N.Ye. Krasnopol'skiy; Tech.  
 Ed. G.V. Smirnovskiy; Rev. Ed. for literature on the Design  
 and Operation of Turbines (Dizayn i Eksploatsatsiya Turbin): P.I. Pelt-  
 sov, Engineer; Balzovskiy, Boris M. (Koren'), Engineer; V.I. Kamenov,  
 Chief of Scientific Section; and I.Ye. Shubakov, Engineer.  
 Candidate of Technical Sciences and I.Ye. Shubakov, Engineer.

PARADISE: This collection of articles is intended for engineering  
 and technical personnel of turbine-construction plants and  
 plant organizations and may also be used by engineers and tech-  
 nicians at power plants employing steam and gas turbines.

CONTENTS: The collection contains 31 reports which present the  
 methods and results of investigations of the working process  
 and the states and conditions of the operation of turbines and  
 their components. Also described are test  
 methods, apparatus, and apparatus. The first part of the collec-  
 tion, with the exception of the work of D.N. Kamenov,  
 reports on the following matters of the aerodynamic, compressor,  
 and turbine laboratories took part in the work: D.N. Kamenov,  
 V.I. Zaslavskiy, Ye.A. Rudakov, the technician N.Ye. Shubakov,  
 V.I. Kamenov, K.D. Iosadov, and Laboratory N.Ye. Shubakov,  
 I.Ye. Shubakov. The second part of the collection consists of  
 reports which illustrate that part of the work of the laboratory  
 (Central Laboratory of the Design Office for Steam and Gas Tur-  
 bines of the Leningrad Mechanical Engineering Institute) concerned with the study  
 of vibration of the turbine and their components, particularly  
 of vibration of the following members of the vibration laboratory  
 the blades, in the work: Engineers I.D. Kovaleva, G.L. Izudin,  
 P.Ye. Melnikova, technicians and workers A.K. Krasnopol'skiy,  
 V.I. Gulin, N.D. Kamenov, and Ye.P. Butyrskiy. The third part  
 is concerned with the calculation and experimental study of the  
 state of stress and the deformations of turbine components. This  
 work was performed by the turbine-construction laboratory. Person-  
 nels mentioned: with the help of the laboratory M.K. Koren',  
 Engineers Ye.S. Zuevskiy and G.L. Izudin, technicians and workers  
 S.P. Serdyukov, and L.Ye. Shubakov. The last part contains arti-  
 cles dealing with calculation methods for producing rotating parts  
 the end of which turbines and compressors are presented. Person-  
 nels mentioned: with the help of the shop of the laboratory  
 M.Ye. Peltsov and G.P. Gavrilov, the leading innovators Ye.V.  
 Kamenov, I.Ye. Shubakov, and V.P. Yash'yeva. References are to  
 be found at the end of 14 of the 31 articles.

Investigations of the Components (Cont.)

SOF/A017

Mr. A.S. Zil'berman, Candidate of Technical Sciences, Ed. of  
 Publishing House V.P. Yash'yeva and N.Ye. Krasnopol'skiy; Tech.  
 Ed. G.V. Smirnovskiy; Rev. Ed. for literature on the Design  
 and Operation of Turbines (Dizayn i Eksploatsatsiya Turbin): P.I. Pelt-  
 sov, Engineer; Balzovskiy, Boris M. (Koren'), Engineer; V.I. Kamenov,  
 Chief of Scientific Section; and I.Ye. Shubakov, Engineer.

PARADISE: This collection of articles is intended for engineering  
 and technical personnel of turbine-construction plants and  
 plant organizations and may also be used by engineers and tech-  
 nicians at power plants employing steam and gas turbines.

CONTENTS: The collection contains 31 reports which present the  
 methods and results of investigations of the working process  
 and the states and conditions of the operation of turbines and  
 their components. Also described are test  
 methods, apparatus, and apparatus. The first part of the collec-  
 tion, with the exception of the work of D.N. Kamenov,  
 reports on the following matters of the aerodynamic, compressor,  
 and turbine laboratories took part in the work: D.N. Kamenov,  
 V.I. Zaslavskiy, Ye.A. Rudakov, the technician N.Ye. Shubakov,  
 V.I. Kamenov, K.D. Iosadov, and Laboratory N.Ye. Shubakov,  
 I.Ye. Shubakov. The second part of the collection consists of  
 reports which illustrate that part of the work of the laboratory  
 (Central Laboratory of the Design Office for Steam and Gas Tur-  
 bines of the Leningrad Mechanical Engineering Institute) concerned with the study  
 of vibration of the turbine and their components, particularly  
 of vibration of the following members of the vibration laboratory  
 the blades, in the work: Engineers I.D. Kovaleva, G.L. Izudin,  
 P.Ye. Melnikova, technicians and workers A.K. Krasnopol'skiy,  
 V.I. Gulin, N.D. Kamenov, and Ye.P. Butyrskiy. The third part  
 is concerned with the calculation and experimental study of the  
 state of stress and the deformations of turbine components. This  
 work was performed by the turbine-construction laboratory. Person-  
 nels mentioned: with the help of the laboratory M.K. Koren',  
 Engineers Ye.S. Zuevskiy and G.L. Izudin, technicians and workers  
 S.P. Serdyukov, and L.Ye. Shubakov. The last part contains arti-  
 cles dealing with calculation methods for producing rotating parts  
 the end of which turbines and compressors are presented. Person-  
 nels mentioned: with the help of the shop of the laboratory  
 M.Ye. Peltsov and G.P. Gavrilov, the leading innovators Ye.V.  
 Kamenov, I.Ye. Shubakov, and V.P. Yash'yeva. References are to  
 be found at the end of 14 of the 31 articles.

Mr. A.S. Zil'berman, Candidate of Technical Sciences, Ed. of  
 Publishing House V.P. Yash'yeva and N.Ye. Krasnopol'skiy; Tech.  
 Ed. G.V. Smirnovskiy; Rev. Ed. for literature on the Design  
 and Operation of Turbines (Dizayn i Eksploatsatsiya Turbin): P.I. Pelt-  
 sov, Engineer; Balzovskiy, Boris M. (Koren'), Engineer; V.I. Kamenov,  
 Chief of Scientific Section; and I.Ye. Shubakov, Engineer.



31283  
S/124/61/000/010/016/056  
D251/D301

76.420  
AUTHOR:

Taushkanova, V.B.

TITLE:

Calculation of the flow around lattices of profiles  
of flow at large subsonic velocities

PERIODICAL:

Referativnyy zhurnal. Mekhanika, no. 10, 1961, 38,  
abstract 10 B231 (V sb. Issled. elementov parovykh  
i gaz. turbin i osevykh kompressorov (Tr.) Leningr.  
metallich. z-da, 6, M.-L., Mashgiz, 91-100)

TEXT:

In the supplement to the "channel" method of computing the flow in lattices, a method is suggested of calculating the ingoing and outgoing edges of the profile, not including points of division of the flow. Moreover, ignoring the effect of compressibility on the profile of transverse velocities in the channel, the author suggests a method of calculating the subsonic flow around the lattice, starting from the well-known distribution of the velocity in a stream of incompressible fluid. Footnote of the reviewer:

Card 1/2

31283

S/124/61/000/010/016/056  
D251/D301

Calculation of the flow...

More exact methods are known for calculating the ingoing and outgoing parts of the flow. (G.Yu. Stepanov: Gidrodinamicheskiye metody rascheta ustanovivshegosya obtekaniye reshetok turbomashin (Hydrodynamic Methods of Solving the Steady Flow Round Lattices of Turbomachines) Dissertatsiya, In-t mekhaniki AN SSSR) [Abstracter's note: Complete translation]

Card 2/2

X

LAPTEVA, Z.A., inzh.; TAUSHEKANOVA, V.B., inzh.

Testing inlet nozzles of turbines and axial-flow compressors. [Trudy]  
IMZ no.6:107-116 '60. (MIRA 13:12)  
(Nozzles)

TAUSHKANOVA, V.B. inzh.

Testing exhaust tail pipes of high-power steam turbines. [Trudy]  
LMZ no.6; 123-132 '60. (MIRA 13:12)  
(Steam turbines--Testing)

TAUSHKIN, Ye., deputat Verkhovnogo Soveta SSSR.

Word from a Karaganda miner. Prof.-tekh. obr. 18 no.8:4  
Ag '61. (MIRA 14:9)

1. Mashinist kombayna shakhty No.31, g. Karaganda.  
(Karaganda--Vocational education)

TAUSIK, A., and others.

Final report by the working committee for controlling the physicommechanical  
properties of finished leathers. p. 44.  
Andor Tauszik; an obituary. p. 46.  
BOR-ES CIPOTECHNIKA, Vol 6, no. 2, Apr 1956.

SOURCE: EEAL, Vol 5, no. 7, July 1956.

Z/019/61/018/001/001/004  
D007/D102

26.224  
AUTHORS:

Tausinger, A., and Jinoch, J.

TITLE:

Development of the homogeneous-reactor vessel ÚJV - ČKD  
Prague

PERIODICAL:

Přehled technické a hospodářské literatury - Energetika  
a elektrotechnika, v. 18, no. 1, 1961, 31, item no.  
E61-450

TEXT: This is an abstract of an article entitled in Czech "Vývoj nádoby homogenního reaktoru ÚJV - ČKD Praha" (Development of the homogeneous-reactor vessel ÚJV - ČKD Prague) originally published in the journal Techn. Zpr. ČKD Stalingrad 5, no. 8, 1959, 229-236. The article describes the vessel design, the arrangement of reactor outlets, tests which will be made to verify the strength and corrosion-resistance of the vessel, and outlines the calculation of stresses originating from internal heat sources and the strength-calculation of the entire vessel. The original article contains 6 figures and 4 references. [Abstracter's note: Complete translation].

Card 1/1

TAUSINGER, A., Dr.; PAPP, M., dr.; MOLNAR, St., dr.; HUTTMANN, A., dr.;  
KOVACH, B., dr.; CIORAPCIU, S., dr.; MOSOIU, Gh., dr.;  
ULARIU, I., dr.

Reduction of venous circulation of the lower extremities in  
therapy of refractory cardiac insufficiency. Med.int.,Bucur.  
8 no.6:861-871 Oct 56.

1. Lucrare efectuata in sectiile de medicina interna, chirurgie  
si cardioreumatologie ale Spitalului unificat nr. 1, Orasul Stalin.  
(CONGESTIVE HEART FAILURE, surgery  
ligation of veins supplying lower extremities, indic.  
& results)  
(LEG, blood supply  
reduction in ther. of refractory cardiac insuff.)



Tausk, A.; Vodrazka, J.

Methylnaphthalene as an insecticide. p. 118.

Vol. 5, no. 3, Mar. 1955.  
CHEMICKY PRUMYSL

SO: Monthly List of East European Accession, (EEAL), LC, Vol. 4, No. 9,  
Sept. 1955, Uncl.

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755120011-8

TAUSH, D.

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755120011-8"

TAUSK, P.

CZECHOSLOVAKIA / Chemical Technology. Chemical Products and Their Application. Water treatment. Sewage water H-5

Abs Jour : Ref. Zhur. - Khimiya, No 2, 1958, No 5136

Author : Sterbacek Z., Tausk P., Trca J.

Inst : Not Given

Title : Purification of Sewage Water Derived from Production of Intermediates

Orig Pub : Chem. prumysl, 1957, No 3, 127-130

Abstract : The initial sewage water contained (in g/liter): nitro-sulfonaphthalene 1.2, sulfo-naphthylamine 16.3, other organic substances, about 4; acids (mostly HCl) 4.7, mineral salts (mostly  $\text{CaSO}_4$  and  $\text{MgSO}_4$ ) about 70. On coagulation of sewage water

Card : 1/3

CZECHOSLOVAKIA / Chemical Technology. Chemical H-5  
Products and Their Application. Water  
treatment. Sewage water

Abs Jour : Ref. Zhur. - Khimiya, No 2, 1958, No 5136

Abstract : oxidability up to 74.4 and 84.1%. The treated  
sewage water is innocuous. Economically the  
method is the most advantageous.

Card : 3/3

TAUSON, L.V.  
CA

Lattice energy of silicates. L. V. Tauson (Akad. Nauk S.S.S.R.), *Doklady Akad. Nauk S.S.S.R.* 67, 687-690 (1949). Fersman (*Gekhimiya* 3 (1937)) formulated the general geochem. principle that all interactions of ions which bring about a mineralization are combined with a reduction of the lattice energies of the products, and a max. free energy. The example of the Bowen reaction principle shows how this general rule may be significant in the crystn. of magmatic systems. Lemmlein (*C.A.* 30, 4373) concluded from calcs. of the energies for a structural unit, e.g. one  $\text{Si}^{4+}$  or  $\text{Al}^{3+}$  in a silicate structure, that in such a series of subsequent mineralizations every later member has a lattice of energetically lower stability than the preceding members. The first crystals from the magmatic melts are, because of their higher lattice energy, more stable, but they are resorbed (in Bowen's reaction principle), and changed to minerals with structures of lower lattice energies, and stabilities. The free energy is reduced to a min. if one of the intermediate minerals is crystal., but increased in the formation

of the following members of the series, in evident contradiction to thermodynamic principles. The general calcn. of the lattice energy of a silicate greatly depends on the type of the structure, i.e. of the interlinkage of the tetrahedral ( $\text{SiO}_4$ ) groups. Bragg's classification of three-dimensional frameworks, layer or chain structures, and types with isolated ( $\text{SiO}_4$ ) groups also det. the character of the energy of the structure in itself. A table is given in which the total lattice energy is calcd. for typical silicates, from Kapustinkii's formula (*C.A.* 36, 5705). Apparently deviations from the general rule of reaction principles, and their energy correlations given above, are observed in micas and feldspars (anorthite); they are brought about by the partial replacement of  $\text{Al}^{3+}$  for  $\text{Si}^{4+}$  in the tetrahedral structure units, and are absent in alkali feldspars. The presence of (OH) groups in micas lowers the binding forces between the layers. W. Fiedl

Inst. Geochem. & Analyt. Chem. in. V.I. Vernadskiy, AS USSR

P.A. TAUSON, L.V.

Lattice energy of heterovalent polymorphous silicates.  
 L.V. Tauson. *Doklady Akad. Nauk S.S.S.R.* 72, 347-50 (1960).—Coupled replacement of heterovalent ions, with a compensation of the charges, is generally observed in plagioclases, micas, amphiboles, etc. Goldschmidt (C.A. 36, 4888) had postulated that cations with higher charges are "preferred," cations with lower charges are "tolerated," in silicate structures by "heterovalent replacement." In this form, the law of isomorphic replacement is not in agreement with the analytical facts: in rock-forming Mg-minerals, Li<sup>+</sup> is enriched rather than Sr<sup>2+</sup>, and in plagioclases Na<sup>+</sup>, rather than Y<sup>3+</sup>, Y<sup>3+</sup>, on the other hand, is enriched in titanite and apatite, Sr<sup>2+</sup> in pyroxenes. The reason for this phenomenon is found by a calcul. of the relative changes of the lattice energy (derived from Kapustinskii's formula, C.A. 44, 3947b) by coupled replacements. The (only approximate) calcul. shows qualitatively that the energy is increased by the following replacements: [Mg Ca] by [Sr Na] in augite; [Mg Mg] by [Li Al] in biotite; [Ca Ca] by [Y Na] in titanite; [Ca Al] by [Na Si] in plagioclases, it is decreased by the following replacements: [Mg Si] by [Sr Al] in biotite; [Ca Ti] by [Y Al] in titanite; [Ca Al] by [Y Mg] in augite. These lattice energy changes are discussed from the tendency of progressive magmatic crystall., by which an increase of stability is observed with decreasing temp. and lattice energy. The minerals of higher temp. stability are those with neg., the late-crystn. minerals those with pos. energy differences, as mentioned above.  
 W. Rittel

TAUSON, L.V.

Isomorphism and the distribution of rare elements in rocks. (In:  
Akademia nauk SSSR. Voprosy petrografii i mineralogii. Moskva,  
1953. Vol. 1, p.53-65) (MLRA 7:4)  
(Rocks, Igneous) (Geochemistry) (Trace elements)

TAUSON, I. V.  
USSR/Geochemistry

Card 1/1

Author : Tauson, L. V.

Title : Finding of certain rare elements in volcanic rocks.

Periodical : Dokl. AN SSSR, 95, 6, 1247 - 1250 - 1964

Abstract : Atoms of a chemical element which might be found in volcanic rocks usually have been in two different states: silicate and non-silicate. The majority of atoms of such an element usually were in silicate structures, forming the main component of the lattice of a silicate or constituting its isomorphic admixture. The minor part of the atoms of the element has been met with in non-silicate states as part of the simplest compounds (forming oxides and sulfides).

Institution : I. V. Vernadskiy Inst. of Geochemistry and Analyt. Chem. of the Acad. of Sci. of the USSR.

Submitted : 16 Feb 1954





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**CIA-RDP86-00513R001755120011-8"**

TAUSOV, L.V.

"Selected works of A.E. Fersman." Reviewed by L.V. Tausov.  
Geokhimiia no.1:122 '56. (MLBA 9:9)

(Fersman, Aleksandr Evgen'evich, 1883-1945)

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755120011-8"

TAUSON, L.V.

Reply to Vh. Edvab's remarks. Izv.AN SSSR.Ser.geol. 21 no.5:  
110-111 My '56. (MLRA 9:8)  
(Geochemistry) (Rocks, Igneous)

TAUSON, L.V.

Rare elements in rocks. Priroda 45 no.7:16-23 J1 '56. (MIRA 9:9)  
(Geochemistry)

*Tauson, L.V.*  
TAUSON, L.V.; BUZAYEV, N.N.

The geochemistry of thallium in granitoids of the Susamyr batholith  
(central Tien-Shan). Geokhimiia no.7:600-605 '57. (MIRA 11:1)

1. Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo  
AN SSSR, Moskva.

(Tienshan--Thallium) (Susamyr--Granitoids)



TAUSON, L.V.; STAVROV, O.D.

On the geochemistry of rubidium in granitoids [with summary in  
English]. Geokhimiia no.8:699-703 '57. (MIRA 11:2)  
(Rubidium)  
(Susamy--Granitoids)

TAUSON, L.V.

Symposium on the geochemistry of rare elements with reference to  
problems of petrogenesis (Moscow, Dec. 20-24, 1957). *Geokhimiia*  
no.2:179-180 '58. (MIRA 12:4)  
(Metals, Rare and minor--Congresses)

3(8)

AUTHORS:

Lecnova, L.L., Tauson, L.V.

SOV/7-58-7-5/13

TITLE:

The Distribution of Uranium in the Minerals of Caledonian  
Granitoids of the Susamyr Batholith (Central Tian-Shan)  
(Raspredeleniye urana po mineralam kaledonskikh granitoidov  
Susamyrskogo batolita (Tsentral'nyy Tyan'-Shan'))

PERIODICAL:

Geokhimiya, 1958, Nr 7, pp 650 - 659 (USSR)

ABSTRACT:

The authors determined the content of uranium of the Susamyr batholith in various intrusion phases (table 1). The mineralogic compound was measured in large thin sections, the uranium content was proved by the luminiscence analysis of micro-weighing of the mineral with the fluorometer FM-42 (table 2). Uranium is to be found in every mineral: about 40 - 50 % in the rock forming, about 50 - 60 % in the accessory ones. By lying out with a 5 % solution of ammonium carbonate and with a 0.5 % solution of hydrochloric acid it was proved that uranium probably is contained in quartz and feldspar in the intercrystal space, as it can be readily lyed out. In return, the high content of uranium in biotite is connected with the mineral itself. Of the accessory minerals especially zircon and orthite contain uranium, sphene in less degree. The radio-graphic analysis also was applied besides the methods mentioned

Card 1/2

The Distribution of Uranium in the Minerals of Caledonian Granitoids of the Susamyr Batholith (Central Tian-Shan) SOV/7-58-7-5/13

above (Fig 1 to 4); photographic plates of the type AII MIKFI were used. The distribution of uranium in the different phases proves that uranium is accumulated in the remaining acid solutions; of the accessory minerals there is one in every phase acting as concentrator of uranium. There are 4 figures, 3 tables, and 12 references, 8 of which are Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im.V.I.Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V.I.Vernadskiy, AS USSR, Moscow)

SUBMITTED: August 19, 1958

Card 2/2